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SOME LINNÆAN TRIVIAL NAMES.

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About Linnæus and botanical nomenclature several notions prevail here in the beginning of the twentieth century which botanists of a hundred years since had scarcely heard, and which would have been promptly objected to and dismissed as bad if they had been offered for acceptance. One such notion is that Linnæus invented and established a system of what is now commonly called binomial nomenclature; a scheme by which each plant species should be known by a single generic name of one word and a specific name of one word, so that there should be but two words to a name.

That Linnæus made no such law or that if he did, he neither said so nor carried it into effect, is sufficiently shown by the following list of names which consist not of two words, but of three, all these occurring in that work, the Species Plantarum, in which we are told that he put this binomial scheme into practice. Supposing this claim to be well founded, it is curious that our botanical forefathers of a hundred or even a hundred and fifty years ago and more, living as they did some of them contemporaneously with him, others active within the first quarter of a century after him, knew nothing of such a claim, should have felt themselves so often called upon to alter Linnæan species names either by exclusion of one of the words of the 97 ternary names, or using their freedom in suppressing such names altogether, supplanting them by others of one word totally new.

Or supposing that such botanists of a hundred years since and more, approved, as a suggestion, the short and handy trivial names, it is certain that scores of them treated Linnæan nomenclature as they did that of others, like a thing subject to amendment and improvement, and so there were a hundred and forty years or so

^{*} September 15, 1911, pages 97 to 128.

next following 1753 during which such Linnæan trivial names as Alisma Plantago aquatica was displaced by the name Alisma Plantago. His Salvia africana coerulea cut down, by some to Salvia Africana, by others to Salvia coerulea. Scandix Pecten Veneris appeared as Scandix Pecten, or else Scandix, the generic name being suppressed and Pecten adopted as generic, the binomial as we call it, became Pecten Veneris. Our subjoined list of 97 names shows how far this correcting and even suppressing of Linnæan ternary names was carried, though it does not much more than begin to show the number of reputable, and even most distinguished botanists, that have had part in this work, either as creating the new and truly binary names, or else as adopting such improvements when made.

One practice some of these forefathers indulged in which was wrong, as being in violation of one of the very fundamentals of all science; if they substituted for the ternary name Veronica Anagallis aquatica the binary Veronica Anagallis, they credited the new name to Linnæus. It was a false credit, and falsehood is the deadliest enemy of science, never anywhere or in any form to be tolerated. The practice of Linnæus shows that he might easily have made also besides Veronica Anagallis aquatica a Veronica Anagallis himself, but the author who suppressed the former and created the latter, should be credited with Veronica Anagallis, and the name Veronica Anagallis aquatica L. ought to appear only as a synonym. This needs no argument. The simple fact that truthfulness demands it is enough.

There are Linnæan names of the several-worded kind that do not admit of such substitution as will leave one of the words in place. It would have been impossible for any of our forefathers to have divided, and thrown away one half of such a trivial name as Noli me tangere; though no one observing the sheer lack in many twentieth century botanists, of common sense as to nomenclature, would be surprised to see Impatiens Noli tangere cut down to Impatiens Noli or Impatiens tangere, either of which, no matter how absurd, would pass muster with the creators and defenders of the codes. A less intellectual epoch than this would have seen the need of rejecting completely the phrase noli me tangere as impossible, and of creating a name new in every syllable, as, for example, Impatiens penduliflora.

In the latter part of the nineteenth century, when Linnæus had

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been dead a hundred years, almost all his three-worded "specific names" had disappeared from nomenclature. Very few could be found in manuals of botany or anywhere else for that matter. There was Alisma Plantago, Veronica Anagallis, Asplenium Ruta-muraria, Panicum Crus-galli, and the like, and all credited to Linnæus, and falsely: for to connect two of Linnæan names by a hyphen is to convert the words into one. It is to make for him a binary name where he had a ternary one. Linnæus could not have perpetrated such a falsification of history as to have written Alisma Plantago-aquatica. That expression would have been in his view worse than needless. The plant had been known for centuries as Plantago aquatica simply, and it was that old name precisely which he wished to preserve. He would not have written in his synonymy Plantago-aquatica Camerarius, because neither Camerarius nor any one else could have been found to present the name in the form of a compound word.

Now in recent years when it has been found that ternary names are very frequent in Linnæus, botanists play on their own minds the trick, and thereby deceive themselves, and falsify to the unwary, who take their word for it, that Alisma Plantago-aquatica is a Linnæan name, which it is not. The hyphen is a harmless looking mark, almost meaningless, yet is not quite so. Its office is to make two words over into one, and by the strength of its littleness people convert nearly a hundred ternary names into binaries, and then credit them to We make for Linnæus some ninety-seven new names that he never thought of, give them to him, and then argue from these of our own making that Linnæus laid down a law making names strictly binary, and carried it into effect. We enact for him a law of which he knew nothing and then pretend that he both made and kept it. That is the reasoning of us hyphenators. Linnæus did indeed sometimes connect two terms of a name by a hyphen. The first name in our list is so made; but even the hyphenated name as made by him, to his contemporaries and to later authors was as objectionable as the unhyphenated, and they suppressed that kind and made new ones in place of them just as unhesitatingly as they did the others; and for the purpose of showing that we insert some such in our list.

There is abroad in the atmosphere of these early twentieth century days a spirit of the absolute immutability of specific names. All the younger members of the botanical fraternity have had no doubt that this was always true; the belief being that from the time of Linnæus forward a specific name once published remains unalterable, even under the transfer of the species to another genus. The study of these Linnæan ternaries has revealed a very different condition of things. It is ascertained that not only did Linnæus himself hold them easily subject to alteration and improvement, but that many of the best botanists during many decades after him were of the same mind, and that old names were suppressed and new ones substituted for them with much freedom. This slavery to the idea of stability, which binds the whole rank and file of most working botanists of to-day, did not hold our forefathers; and even down to and within the twentieth century there are defenders of the principle that names that are bad ought to be suppressed, and new ones that are good put in the place of them. On this point our list tells at least a part of that story very effectually.

1. Acer Pseudo-Platanus:

Acer quinquelobum Gilib., 1781.

Acer procerum Salisb., 1796.

Acer Pseudoplatanus Stokes, 1812, S. F. Gray, 1821, C. B. Presl, 1826.

Acer majus S. F. Gray, 1821.

Acer platinifolium St. Lager, 1880.

Acer Pseudo-Platanus Hook. & Jacks., 1893.

2. Adiantum Capillus Veneris:

Adiantum coriandrifolium Lam., 1778, Lestib., 1804.

Adiantum fontanum Salisb., 1796.

Adiantum cuneifolium Stokes, 1812.

Adiantum capillaceum Dulac, 1867.

Adianton capillare St. Lager, 1880.

Adiantum Capillus-Veneris Britton, 1896.

Adiantum capillus-veneris Underw., 1900.

3. Aesculus Hippo Castanum:

Hippocastanum vulgare Duhamel, 1755, Moench, 1794, Gaertner, 1802.

Aesculus hippocastanum P. Miller, 1768, Scopoli, 1772, Hook. & Jacks., 1893.

Aesculus procera Salisb., 1796.

Hippocastanum Aesculus Cav., 1801.

Aesculus hippocastanum Lestib., 1804.

Aesculus septenata Stokes, 1812.

Aesculus castanea St. Lager, 1880.

4. Agrostemma Coeli rosa:

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Lychnis coelirosa Lestib., 1805. Lychnis coeli-rosa DC., 1815. Eudianthe oculata A. Brown, 1849. Lychnis coelestis St. Lager, 1880. Agrostemma Coelf-rosea Hook. & Jacks., 1893. Lychnis Coeli-rosa Hook. & Jacks., 1894.

5. Agrostemma Flos Jovis:

Lychnis umbellifera Lam., 1778. Agrostemma flojovis Moench, 1802. Lychnis incana St. Lager, 1880. Lychnis Flos-Jovis Hook. & Jacks., 1894. Agrostemma Flos-Jovis Hook. & Jacks., 1893.

6. Agrostis spica venti:

Apera Spicaventi Berknh., 1795, Hook. & Jacks., 1893. Agrostis purpurea Gaudin, 1811. Apera effusa S. F. Gray, 1821. Agrostis Spica-venti Beauv., 1812, Hook & Jacks., 1893. Agrostis ventosa Dulac, 1867, St. Lager, 1880.

7. Alisma Plantago aquatica:

Alisma Plantago P. Miller, 1768, Scopoli, 1772, Vitman, 1789, Moench, 1794, Sibthorp, 1794, Berkenhout, 1795, Murray, 1797, Jolyclerc, 1805, Eaton & Wright, 1840, Hook. & Jacks., 1893. Alisma paniculatum Stokes, 1812. Alisma majus S. F. Gray, 1821. Alisma verticillatum Dulac, 1867. Alisma plantagineum St. Lager, 1880. Echinodorus vulgaris Bubani, 1901. Alisma Plantago-aquatica Hook. & Jacks., 1893.

8. Allium Chamae Moly:

Allium Chamaemoly Hill, 1774, Jolyclerc, 1805, Steudel, 1821, 1840, Hook. & Jacks., 1893. Saturnia cernua Marrati, 1822, Allium Columnae Bubani, 1901.

9. Amaryllis Bella donna:

Amaryllis Belladonna Linn., 1763, Hook. & Jacks., 1893. Amaryllis Bella Donna Hill, 1774. Amaryllis rosea Lam., 1783. Callicore rosea Link, 1829, Belladonna purpurascens Sweet, 1830. Coburgia Belladonna Hook. & Jacks., 1893.

10. Amomum Grana Paradisi:

Amomum elatum Salisb., 1794.

Torymenes officinalis Salisb., 1812.

Amomum Granum-paradisi Hook. & Jacks., 1893. Amomum Granum-Paradisi Hook. & Jacks., 1893.

11. Anthyllis Barba jovis:

Vulneraria argentea Lam., 1783.

Barba jovis argyrophylla Moench, 1794.

Anthyllis argentea Salisb., 1796.

Vulneraria Barba-Jovis C. B. Presl, 1826, Link, 1830, Hook. & Jacks., 1895.

Anthyllis Barba-Jovis Hook. & Jacks., 1893.

Barba-Jovis argyrophylla Hook. & Jacks., 1893.

12. Apocynum foliis androsaemi:

Apocynum androsaemifolium Linn., 1763, Crantz, 1766, Moench, 1794, Hook. & Jacks., 1893, referring to Linn., Sp.

Pl. p. 213.

Apocynum androsaemi folium P. Miller, 1768.

Apocynum muscipulum Moench, 1794.

Apocynum androsaemi-folium Lestib., 1804.

13. Arbutus Uva ursi:

Arbutus uva ursi Crantz, 1766, Steudel, 1841.

Uva ursi procumbens Moench, 1794.

Arbutus Uva Ursi Berkenhout, 1795.

Arbutus procumbens Salisb., 1796.

Arbutus buxifolia Stokes, 1812, S. F. Gray, 1821.

Arctostaphylos officinalis Wimm., 1832, 1840.

Arbutus officinalis Boiss., 1867.

Arbutus Uva-ursi Hook. & Jacks., 1893.

Arctostaphylos Uva-ursi Hook. & Jacks., 1893.

Uva-Ursi buxifolia Hook. & Jacks., 1895.

14. Ascyrum Crux andreae:

Ascyrum Crux-andreae Desf., 1829, Hook. & Jacks., 1893.

Ascyrum cruciatum St. Lager, 1880.

Hypericum crux andreae Crantz, 1766.

Hypericum crux Andreae Lestib., 1804.

15. Asplenium Adiantum nigrum:

Asplenium Adiant-nigrum Scopoli., 1772.

Asplenium nigrum Lam., 1778, Bernh., 1802, Lestib., 1804, Stokes, 1812, Dulac, 1867, St. Lager, 1880.

Phyllitis lancifolia Moench, 1802.

Asplenium Adiantum-nigrum Berknh., 1795.

Trichomanes nigrum Bubani, 1901.

16. Asplenium Ruta muraria:

Asplenium ruta muraria officinarum Crantz, 1766. Asplenium murorum Lam., 1778. Asplenium murale Stokes, 1812, Salisb., 1796, St. Lager, 1880. Asplenium murarium Dulac, 1867. Asplenium ruta-muraria Underw., 1900.

17. Asplenium Trichomanes dentatum:

Asplenium dentatum Murray, 1797, Lestib., 1804, Steudel, 1824, Underw., 1900.
Asplenium Trichomanes-dentatum Maxon, 1901.

Asplenium Trichomanes ramosum:
 Asplenium lanceolatum Hudson, 1778.
 Trichomanes lanceolatum Bubani, 1901.

19. Aster Novae Angliae:

Aster altissimus Moench, 1794. Aster Novae-Angliae Hook. & Jacks., 1893.

20. Aster Novi Belgii:

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Aster uniflorus Moench, 1794. Aster Novi-Belgii Hook. & Jacks., 1893.

21. Atropa Bella donna:

Atropa Belladonna Linn., 1762, Berknh., 1795, Stokes, 1812, Dulac, 1867, Hook. & Jacks., 1893.
Belladonna trichotoma Scopoli, 1772, Moench, 1794.
Belladonna baccifera Lam., 1778.
Atropa lethalis Salisb., 1796.

22. Bignonia Unguis cati:

Bignonia unguis Jolyclerc, 1805, Desf., 1829. Bignonia unguis cati Linn., 1763, Lestib., 1804. Doxantha Unguis Miers, 1863. Doxantha unguiculata Miers, 1863. Bignonia unguiculata St. Lager, 1880. Bignonia Unguis Hook. & Jacks., 1893. Bignonia Unguis-cati Hook. & Jacks., 1893.

23. Byssus Flos aquae:

Byssus flos aquae Crantz, 1766. Nostoc aquae Steudel, 1821. Anabaena flos-aquae Wolle, 1867. Anabaena Flos-aquae G. S. West, 1904.

24. Cactus Ficus indica:

Opuntia Ficus Indica P. Miller, 1768, Hill, 1769. Cactus Ficus Stokes, 1812. Opuntia ficus indica Steudel, 1821. Opuntia ficindica St. Lager, 1880. Opuntia Ficus-indica Hook. & Jacks., 1894. Cactus Ficus-indica Hook. & Jacks, 1893.

25. Campanula Speculum Veneris:

Campanula Speculum P. Miller, 1768, Hill, 1769 and 1775, Moench, 1794, Hook. & Jacks., 1893.
Campanula speculum Lam., 1778.
Specularia arvensis Durand, 1782, S. F. Gray, 1821, Bubani, 1900.
Campanula pulchella Salisb., 1796.
Prismatocarpus Speculum L'Herit., 1788, Dulac, 1867.
Specularia vulgaris St. Lager, 1880.
Specularia Speculum Hook. & Jacks., 1895.
Legousia Speculum Hook. & Jacks., 1894.

26. Carex pseudo cyperus:

Trasus chlorostachyos S. F. Gray, 1821. Carex Pseudocyperus S. F. Gray, 1821, Steudel, 1821. Carex Pseudo-cyperus S. F. Gray, 1821, Hook. & Jacks., 1893. Carex longibracteata Dulac, 1867.

27. Chenopodium Bonus Henricus:

Atriplex bonus Henricus Crantz, 1766, Steudel, 1821. Chenopodium sagittatum Lam., 1778
Chenopodium bonus henricus Moench, 1794.
Chenopodium esculentum Salisb., 1796.
Chenopodium spinacifolium Stokes, 1812, S. F. Gray, 1821.
Chenopodium triangulare Dulac, 1867.
Chenopodium ruderale St. Lager, 1880.
Chenopodium Bonus-Henricus Hook. & Jacks., 1893.
Blitum perenne Bubani, 1897.

28. Chrysocoma Coma aurea:

Chrysocoma Coma Aurea Hill, 1775. Chrysocoma aurea Salisb., 1796. Chrysocoma coma aurea Moench, 1802, Steudel, 1821. Crinita linearifolia Moench, 1802, Steudel, 1821. Chrysocoma comaurea Lestib., 1804. Chrysocoma Coma-aurea Hook. & Jacks., 1893.

29. Coix Lacryma Jobi:

Coix Lacryma Linn., 1758-9, Steudel, 1821. Coix arundinacea Lam., 1789. Coix lachryma Moench, 1794. Lithagrostis lachryma jobi Moench, 1794. Coix pendula Salisb., 1796. Coix ovata Stokes, 1812. Coix Lacryma-Jobi Hook. & Jacks., 1893. Lithagrostis lacryma-Jobi Hook. & Jacks., 1894.

30. Convolvulus Pes caprae:

Convolvulus Pes Caprae Hill, 1772. Convolvulus capripes Stokes, 1812. Ipomoea aegopoda St. Lager, 1880. Ipomoea Pes-caprae Hook. & Jacks., 1893. Ipomoea biloba Hook. & Jacks., 1893.

31. Cotyledon umbilicus Veneris:

Cotyledon Umbilicus Hill, 1775, Steudel, 1821 and 1840, Hook. & Jacks., 1893.

Cotyledon umbilicata Lam., 1778.

Cotyledon umbilicus Lam., 1778, Lestib., 1804.

Cotyledon rupestris Salisb., 1797.

Umbilicus pendulinus Lam. & DC., 1805 and 1815, S. F. Gray, 1821, Dulac, 1867.

Cotyledon umbilicifolia Stokes, 1812.

Cotyliphyllum Umbilicus Hook. & Jacks., 1893.

Umbilicus Veneris Bubani, 1900.

32. Crataegus Crus galli:

Crataegus crus galli Moench, 1794. Mespilus cuneifolia Moench, 1794. Crataegus calcarigera Salisb., 1796. Crataegus Crus-galli Hook. & Jacks., 1893.

33. Daphne Tarton raira:

Thymelaea tarton-raira Allioni, 1775. Daphne candicans Lam., 1778. Thymelaea Tarton-raira Allioni, 1785. Daphne tarton-raira Lam., 1788. Daphne tartonraira Jolyclerc, 1805. Daphne Tartonraira Stokes, 1812. Mussche, 1817. Steudel, 1821 and 1841, Hook. & Jacks., 1893. Passerine Tarton-raira Steudel, 1821. Passerine Tartonraira Steudel, 1821 and 1841. Passerine Tartonraira Hook. & Jacks., 1893. Thymelaea Tartonraira Steudel, 1841, Hook. & Jacks., 1895. Daphne Tarton-raira Lam., 1862-3.

34. Elymus Caput medusae:

Elymus caput Medusae Steudel, 1840. Elymus Caput-Medusae Forbes, 1833, Hook. & Jacks., 1893.

35. Epidendrum Flos aëris:

Epidendrum Flos Aëris Hill, 1774. Aërides Arachnites Sw., 1799. Arachnanthe moscifera Blume. Epidendrum aërosanthum St. Lager, 1880. Epidendrum Flos-aëris Hook. & Jacks, 1893. 36. Erica pallido-purpurea:

Erica purpurascens Linn., 1762.

37. Erica viride-purpurea:

Erica pelviformis Salisb., 1796. Erica viridipurpurea Hook. & Jacks., 1893.

38. Erythronium Dens canis:

Erythronium Dens Canis Hill, 1774. Erythronium maculosum Lam., 1778. Erythronium vernale Salisb., 1796. Erythronium dens canis Moench, 1802. Erythronium caninum Dulac, 1867. Erythronium bulbosum St. Lager, 1880.

39. Euphorbia Caput medusae:

Medusea major Haw., 1812. Euphorbia Caput-Medusae Hook. & Jacks., 1893.

Erythronium Dens-canis Hook. & Jacks., 1893.

40. Ferula Assa foetida:

Ferula Assafoetida Stokes, 1812. Ferula Asa-foetida Sprengel, 1813. Ferula foetida St. Lager, 1880. Ferula Assa-foetida Hook. & Jacks., 1893.

41. Hedysarum Caput galli:

Onobrychis Caput Gallinaceum Frankenan, 1766. Hedysarum caput galli Jolyclerc, 1805. Hedysarum Caput-galli Hook. & Jacks., 1893.

42. Hemerocallis Lilio Asphodelus:

Hemerocallis flava Linn., 1762, etc., etc. Hemerocallis lutea Gaert., 1802. Hemerocallis Lilioasphodelus Steudel, 1841, Hook. & Jacks., 1893.

43. Hibiscus Rosa sinensis:

Hibiscus Sinensis P. Miller, 1768. Hibiscus Rosa Sinensis, Hill, 1772. Hibiscus festalis Salisb., 1796. Hibiscus rosiflorus Stokes, 1812. Hibiscus Rosa-sinensis Hook. & Jacks., 1893.

44. Hyacinthus non scriptus:

Hyacinthus pratensis Lam., 1778. Hyacinthus Non Scriptus Hill, 1785, Berk., 1795. Scilla festalis Salisb., 1796. Scilla nutans Stokes, 1812. Endymion nutans Dum., 1821. Hyacinthus Non-scriptus Kew Ind. Scilla nonscripta Hook. & Jacks., 1895.

45. Hydrocharis Morsus ranae:

Hydrocharis vulgaris Hill, 1756. Hydrocharis Morsus Hanae Hill, 1775, Berkenhout, 1795. Hydrocharis asarifolia S. F. Gray, 1820. Hydrocharis cordifolia St. Lager, 1880. Hydrocharis batrachyodegma St. Lager, 1880. Hydrocharis Morsus-ranae Hook, & Jacks., 1893.

46. Hypnum Crista castrensis:

Hypnum castrense Stokes, 1812. Hypnum cristatum St. Lager, 1880.

47. Impatiens Noli tangere:

Impatiens noli me tangere Crantz, 1766, Hill, 1772, 1775, 1786, Buchoz, 1800.

Impatiens Noli-tangere Berknh., 1795, Hook. & Jacks., 1893.

Balsamina Noli-tangere Lestib., 1804.

Impatiens Nolitangere Stokes, 1812.

Impatiens Noli-me tangere Desf., 1829.

Impatiens lutea Lam., 1778, Dulac, 1867.

Impatiens penduliflora St. Lager, 1880.

Impatiens Noli-me-tangere Hook. & Jacks., 1893.

48. Inula Oculus Christi:

Inula sericea St. Lager, 1880. Inula Oculus-Christi Hook. & Jacks., 1893. Inula lanuginosa St. Lager, 1886.

49. Ipomoea bona Nox (2d ed.):

Calonyction speciosum Chois., 1834. Calonyction Bona-nox Hook. & Jacks., 1893. Ipomoea Bona-nox Hook. & Jacks., 1893.

50. Ipomoea Pes tigridis:

Ipomoea Pes-tygridis Hill, 1772, 1775. Convolvuloides palmata Moench, 1794. Convolvulus bryoniaefolius Salisb., 1796. Ipomoea tigrina Persoon, 1805. Ipomoea tigripes Stokes, 1812. Ipomoea pes-tigridis Hook. & Jacks., 1893.

51. Lonicera Peri Clymenum:

Lonicera Periclymenum Linn., 1762, Stokes, 1812, Hook. & Jacks., 1894.
Caprifolium sylvaticum Lam., 1778.
Euchylia verticillata Dulac, 1867.

52. Lychnis Flos cuculi:

Lychnis Floscuculi P. Miller, 1768. Lychnis Flos Cuculi Hill, 1773, Berknh., 1795. Lychnis laciniata Lam., 1778, Salisb., 1796. Lychnis flos cuculi Moench, 1794. Lychnis laciniflora Stokes, 1812, Dulac, 1867. Lychnis plumaria S. F. Gray, 1821. Floscuculi pratense Opiz, 1852. Coccyanthe pratensis Schur., 1866. Lychnis coccugosantha St. Lager, 1886. Lychis Flos-cuculi Hook. & Jacks., 1894.

53. Lysimachia Linum Stellatum:

Lysimachia Linum stellatum Hill, 1772, Gaertner (1788), 1801. Lysimachia Linum Hill, 1775. Lysimachia linifolia Salisb., 1796. Asterolinum stellatum Hoffmg. & Link, 1809. Asterolinum Linum-stellatum Duby in DC., 1844, Kew Ind. Lysimachia Linum-stellatum Duby in DC., 1844, Hook. & Jacks., 1894. Asterolinum lysimachioideum St. Lager, 1880. Lysimachia stellata St. Lager, 1880.

54. Marrubium Pseudo dictamnus:

Beringeria pseudodictamnus Necker, 1790. Ballota pseudodictamnus Benth., 1832, Hook. & Jacks., 1894. Ballote dictamnifolia St. Lager, 1880. Marrubium Pseudo-dictamnus Hook. & Jacks., 1894.

55. Mespilus Chamae Mespilus:

Mespilus chamae mespilus Crantz, 1766. Mespilus Chamaemespilus P. Miller, 1768, Hook. & Jacks., 1894. Crataegus humilis Lam., 1778. Lazarolus Chamaemespilus Borck. Pyrus Chamaemespilus Hook. & Jacks., 1895.

56. Mimosa Unguis cati:

Mimosa unguiscati Lestib., 1804. Inga felina Stokes, 1812. Pithecolobium Unguis-cati Benth., 1844, Hook. & Jacks., 1894. Inga Unguis-cati Hook. & Jacks., 1893. Pithecolobium Unguis-cati Hook. & Jacks., 1894.

57. Mussaenda fructu frondoso:

Musaenda frondosa Linn., 1762, Murray, 1797, Sprengel, 1825, Hook. & Jacks., 1894. Mussaenda villosa Stokes, 1825. 58. Narcissus Pseudo Narcissus:

Narcissus festalis Salisb., 1796. Narcissus serratus Haw., 1803. Narcissus Pseudonarcissus Stokes, 1812. Stephanophorum grandiflorum Dulac, 1867. Narcissus grandiflorus St. Lager, 1880. Narcissus Pseudo-Narcissus Hook. & Jacks., 1894.

59. Nyctanthes arbor tristis:

Nyctanthes tristis Salisb., 1796. Nyctanthes Arbor-tristis Hook. & Jacks., 1894.

60. Ophrys Nidus avis:

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Ophrys nidus avis Lam., 1778, 1793. Ophrys Nidus Avis Berknh., 1795. Neottia squamosa Dulac, 1867. Neottia orobanchioides St. Lager, 1880. Neottia Nidus-avis Hook. & Jacks., 1894. Ophrys Nidus-avis Hook. & Jacks., 1894.

61. Oxalis Pes caprae:

Oxalis Pes Caprae Hill, 1775. Oxalis caprina Thunb., 1781. Oxalis Pes-caprae Hook. & Jacks., 1894.

62. Panicum crus galli (?):

Panicum Crusgalli Berknh., 1795. Panicum grossum Salisb., 1796. Panicum Crus-galli S. F. Gray, 1821, Hook. & Jacks., 1894. Echinochloa Crus-galli S. F. Gray, 1821. Panicum alectromerum Dulac, 1867. Panicum crus-galli Dulac, 1867. Panicum alectrocnemum St. Lager, 1880.

Panicum crus corvi, 2d ed. 1762, Syst. Pl. ed. x, 1758-9:
 Panicum corvipes Stokes, 1812.
 Panicum Crus-corvi Hook. & Jacks., 1894.

64. Pedicularis Sceptrum Carolinum:

Pedicularis sceptrum Carolinum Crantz., 1766. Pedicularis Sceptrum Schrank, 1789. Pedicularis sceptrum carolinum Steudel, 1841. Pedicularis macrostachya St. Lager, 1880. Pedicularis Sceptrum-Carolinum Hook. & Jacks., 1894.

65. Phlomis Herba venti:

Phlomis herba venti Crantz, 1766, Lam., 1778, Lestib., 1804. Phlomis Herba Venti P. Miller, 1768, Hill, 1773. Phlomis ventosa St. Lager, 1880. Phlomis Herba-venti Hook. & Jacks., 1894. 66. Phlomis nepetae folia 2d ed.:

Phlomis nepetaefolia Linn., 1753. Phlomis nepetifolia Murray, 1779, Moench, 1794. Leonurus globosus Moench, 1794.

67. Polypodium Filix foemina:

Polypodium filix femina Lam., 1778. Aspidium filix foemina Steudel, 1821. Athyrium Filix-femina Presl, 1836. Athyrium fimbriatum Dulac, 1867. Asplenium fimbriatum St. Lager, 1880. Asplenium Filix-foemina Britton, 1896. Polypodium Filix-foemina Underw., 1900.

68. Polypodium Filix fragile:

Polypodium album Lam., 1778.
Polypodium fragile Linn., 1762, Hudson, 1778, With., 1791, Lightfoot, 1792, Britton, 1896, etc., etc.
Cyathea fragilis Smith, 1805, Stokes, 1812.
Cyste fragilis Dulac, 1867, Britton, 1896.
Cystopteris fragilis Underw., 1900.
Cystopteris polymorpha Bubani, 1901.

69. Polypodium Filix mas:

Polypodium filix mas Lam., 1778.
Nephrodium crenatum Stokes, 1812.
Lastraea filix mas Presl, 1836.
Lastraea officinalis Presl, 1836, Bubani, 1901.
Polystichum obtusum Dulac, 1867.
Dryopteris Filix-mas Britton, 1896.
Polypodium Filix-mas Britton, 1896.
Aspidium Filix-mas Britton, 1896.
Dryopteris filix-mas Underw., 1900.

70. Prunus Lauro Cerasus:

Prunus Lauro-Cerasus Linn., 1762–3, Linn., 1764. Prunus lauro cerasus Crantz., 1766. Padus Laurocerasus P. Miller, 1768. Prunus grandifolia Salisb., 1796. Prunus Lauro-cerasus Stokes, 1812, Hook. & Jacks., 1894.

71. Rhamnus Spina Christi:

Ziziphus Africana P. Miller, 1768. Ziziphus africana Stokes, 1812. Ziziphon spinosum St. Lager, 1880. Rhamnus Spina-Christi Hook. & Jacks., 1895. Ziziphus Spina-Christi Hook. & Jacks., 1895.

72. Rhinanthus Crista galli:

Rhinanthus Cristagalli Hill, 1773-5.

Rhinanthus glaber Lam., 1778, S. F. Gray, 1821.

Alectorolophus glaber All., 1785, Moench, 1794, Dum., 1821, 1827.

Rhinanthus minor Ehr., 1791.

Rhinanthus inflatus Salisb., 1796.

Rhinanthus Crista-galli Persoon, 1807, Hook. & Jacks., 1895.

Rhinanthus cristatus Stokes, 1812.

Rhinanthus vulgaris Gueldenst., ex Ledeb., 1846.

73. Ribes Uva crispa:

Grossularia Uva Crispa P. Miller, 1768.

Ribes Uva Scopoli, 1772.

Ribes spinosum Lam., 1778.

Ribes Uva-crispa Berknh., 1795, Hook. & Jacks., 1895, Britton, 1896.

Ribes glabra Stokes, 1812.

Grossularia vulgaris Spach., 1838.

Ribes crispum Dulac, 1867, St. Lager, 1880. Grossularia Uva-crispa Hook. & Jacks., 1893.

74. Robinia Pseudo Acacia:

Robinia Pseud-Acacia Linn., 1763.

Robinia pseudacacia Crantz, 1866, Moench, 1794.

Robinia Pseudoacacia Hill, 1769.

Robinia peudo-acacia Lam., 1778, Buchoz, 1800.

Pseudo-acacia vulgaris Medic, 1787, Hook. & Jacks., 1895.

Pseudacacia odorata Moench, 1794.

Robinia fragilis Salisb., 1796.

Pseudacacia vulgaris (Tour.) Greene, 1894.

Robinia Pseudacacia Stokes, 1812, Hook. & Jacks., 1895.

75. Salvia africana lutea:

Salvia aurea Linn., 1762, Hill, 1773, Salisb., 1796, Hook. & Jacks., 1895.

Salvia lutea Hook. & Jacks., 1895.

76. Salvia africana coerulea:

Salvia africana Linn., 1763, Hill, 1773, Hook. & Jacks., 1895.

Salvia Africana Hill, 1775.

Salvia rotundifolia Salisb., 1796.

Salvia coerulea Hook. & Jacks., 1895.

77. Santolina Chamae Cyparissus:

Santolina Chamaecyparissus Hill, 1775, Steudel, 1841, Hook. & Jacks., 1895.

Santolina cupressiformis Lam., 1778.

Santolina dentata Moench, 1794.

Santolina pallida Salisb., 1796. Santolina chamaecyparissus Buchoz, 1800. Santolina brevidentata Stokes, 1812.

78. Scandix Pecten Veneris:

Scandix pecten veneris Crantz, 1766.
Scandix Pecten Veneris dicta Hill, 1772.
Pecten Veneris Lam., 1778, Hook. & Jacks., 1894.
Scandix pecten Lam., 1778.
Scandix Pecten Veneris Berknh., 1795.
Scandix pectinifera Stokes, 1812.
Scandix Pecten Dulac, 1867.
Scandix Pecten-Veneris Dulac, 1867, Hook. & Jacks., 1895.

79. Scilla Lilia Hyacinthus:

Scilla Lilio Hyacinthus Hill, 1774. Ornithogalum squamosum Lam,, 1778. Scilla squamosa Dulac, 1867. Scilla Lilio-hyacinthus Hook. & Jacks., 1895.

80. Senecio Pseudo China:

Senecio pseudo-china Crantz, 1766.

Gynura Pseudo-china DC., 1837, Hook. & Jacks., 1893.

Gynura Pseudochina Steudel, 1841.

Gynura nudicaulis Am., 1836.

Gynura Pseudo-China Hook. & Jacks., 1893.

81. Serratula chamae Peuce:

Jacks., 1895.

Serratula chamae peuce Linn., 1762–3.
Pteronia Chamaepeuce Spr., 1826.
Ptilostemon muticum Cass., 1826.
Chamaepeuce mutica DC., 1836.
Serratula Chamaepeuce Hook. & Jacks., 1895.
Cnicus Chamaepeuce Hook. & Jacks., 1893.

82. Sisymbrium Nasturtium aquaticum:

Nasturtium aquaticum Hill, 1755.
Sisymbrium vulgare Hill, 1756.
Sisymbrium Nasturtium Aquaticum Hill, 1769.
Sisymbrium Nasturtium Scopoli, 1772, Stokes, 1812, Steudel, 1821, S. F. Gray, 1821.
Cardamine fontana Lam., 1778.
Sisymbrium nasturtium Lam., 1778.
Sisymbrium aquaticum Lam., 1778.
Cardaminum Nasturtium Moench, 1794.
Nasturtium officinale R. Br., 1812, Hook. & Jacks., 1894.
Nasturtium Dodonaei Lej. Court., 1826.
Sisymbrium Nasturtium-aquaticum Steudel, 1841, Hook. &

83. Smilax bona nox:

Smilax Bona Nox Hill, 1775. Smilax Bona nox Willd., 1805. Smilax Bona-nox Hook, & Jacks., 1895.

84. Smilax Pseudo China:

Smilax pseudo-china Crantz, 1760. Smilax Pseudo China Hill, 1775. Smilax Pseudo-china Stokes, 1812. Smilax Pseudo-China Britton, 1896. Smilax Pseudo-china Hook. & Jacks., 1895.

85. Solanum Pseudo Capsicum:

Pseudo capsicum undulatifolium Moench, 1794. Solanum hyemale Salisb., 1796. Solanum Pseudocapsicum Salisb., 1796, Hook. & Jacks., 1895. Solanum pseudocapsicum Jolyclerc, 1805. Pseudocapsicum undulatum Steudel, 1841.

86. Strychnos Nux vomica:

Strychnos nux vomica Crantz, 1766. Strychnos ovalifolia Stokes, 1812. Strychnos vomicus St. Lager, 1880. Strychnos Nux-vomica Hook. & Jacks., 1895.

87. Thlaspi Bursa pastoris:

Iberis bursa pastoris Crantz.
Thlaspi Bursapastoris Hill, 1773.
Thlaspi bursa pastoris Lam., 1778.
Bursa pastoris Wigg., 1780.
Thlaspi Bursa Thunb., 1784, Steudel, 1841.
Capsella Bursa-pastoris Hook. & Jacks., 1893, Britton, 1896.
Thlaspi infestum Salisb., 1796.
Thlaspi cuneatum Stokes, 1812.
Thlaspi bursetta Bergeret, ex Steudel, 1841.
Capsella pastoralis Dulac, 1867.
Capsella triangularis St. Lager, 1880.
Capsella poimenobalantion St. Lager, 1880.

88. Trifolium Melilotus coerulea:

Trifolium coeruleum Hill, 1775, Willd., 1800. Trifolium Melilotus Coerulea Hill, 1786. Melilotus coerulea Moench, 1794, Desf., 1829, Lam. Trifoliastrum coeruleum Moench, 1794. Trigonella coerulea Seringe in DC., 1825. Trifolium Melilotus-coerulea Hook. & Jacks., 1895.

89. Trifolium Melilotus corniculata:

Trigonella corniculata Linn., 1758–9, 1763, Hill, 1775, 1786. Trifolium Melilotus-corniculata Hook. & Jacks., 1895.

90. Trifolium Melilotus cretica:

Trifolium Creticum Hill, 1775.
Trifolium Melilotus Cretica Hill, 1786, Ser., in DC., 1825.
Melissitus dentata Moench, 1794.
Pocockia cretica Ser., DC., 1825.
Melilotus cretica Desf., 1829, Steudel, 1841.
Trigonella cretica Bois., 1867.
Trifolium Melilotus-cretica Hook. & Jacks., 1895.

91. Trifolium Melilotus indica:

Trifolium indicum Hill, 1775.
Melilotus indica All., 1785.
Trifolium Melilotus Indica Hill, 1786.
Melilotus levis Moench, 1794.
Melilotus parviflora Desf., 1798–1800.
Trifolium indicum Loisel., 1818, Thunberg, 1807–13.
Trifolium Melilotus Hook. & Jacks., 1895.
Trifolium Melilotus-indica Hook. & Jacks., 1894.

92. Trifolium Melilotus italica:

Trifolium Italicum Hill, 1775. Melilotus Italica Lam., 1778, Desf., 1829. Melilotus rugosa Moench, 1794. Trifolium Melilotus Italica Hill, 1786. Trifolium Melilotus-italica Hook. & Jacks., 1895.

93. Trifolium Melilotus officinalis:

Trifolium Melilotus officinarum Crantz, 1766.
Trifolium officinales Scopoli, 1772, Stokes, 1812.
Trifolium Officinales Hill, 1775.
Melilotus officinalis Lam., 1778, Moench, 1794, S. F. Gray, 1821, Desf., 1829.
Trifolium Melilotus Officinalis Hill, 1786.
Melilotus citrina Duval., ex Steudel, 1821.
Brachylobus officinalis Dulac, 1867.
Trifolium Melilotus-officinalis Hook. & Jacks., 1895.
Trifolium Melilotus-officinarum Hook. & Jacks., 1895.

94. Trifolium Melilotus ornithopodioides:

Trifolium ornithopodioides Hill, 1775.

Lotus ornithopodioides Hill, 1775.
Trigonella purpurascens Lam., 1778.
Trifolium Melilotus Ornithopodioides Hill, 1786.
Melilotus ornithopodioides Desr., 1797.
Falcatula Falso-Trifolium Steudel, 1821.
Trigonella ornithopodioides S. F. Gray, 1821, Desf., 1829.
Falcatula falsotrifolium Steudel, 1841, Hook. & Jacks., 1893.
Trifolium Melilotus-ornithopodioides Hook. & Jacks., 1895.

95. Trigonella Foenum graecum:

Foenum Graecum sativum Buchoz, 1770.
Trigonella Foenugraecum Hill, 1775 and 1786, Stokes, 1812.
Foenum graecum officinale Moench, 1794.
Trigonella Foenum-graecum Sibth., 1818, Kew Ind.
Buceras foenum graecum All., 1785.
Trigonella gladiata Steudel, 1841.
Trigonella graeca St. Lager, 1880.
Foenum-graecum sativum Hook. & Jacks., 1893.
Buceras Foenum-graecum Hook. & Jacks., 1893.
Foenum-Graecum officinale Hook. & Jacks., 1893.
Xyphostylis erectus Gasparr., ex Bubani, 1900.

96. Vaccinium Vitis idaea:

Vaccinium punctatum Lam., 1778.
Vaccinium vitis idaea Lam., 1778.
Vitis idaea punctata Moench, 1794.
Vaccinium nemorosum Salisb., 1796.
Vaccinium punctifolium Stokes, 1812.
Vitis-Idaea punctifolia S. F. Gray, 1821.
Vaccinium rubrum Dulac, 1867, St. Lager, 1880.
Vitis-Idaea punctata Hook. & Jacks., 1895.
Vaccinium vitis-Idaea Hook. & Jacks., 1895.
Vitis-Idaea Vitis-Idaea Britton, 1901.
Myrtillus exigua Bubani, 1906.

97. Vella Pseudo Cytisus:

Vella Pseudo-Cytisus Hill, 1773, Steudel, 1821. Vella integrifolia Salisb., 1796. Vella Pseudocytisus Steudel, 1841, Hook. & Jacks., 1895.

98. Verbesina Pseudo Acmella:

Spilanthes Pseudo Acmella Steudel, 1821. Pyrethrum Acmella Steudel, 1821. Verbesina Pseudo-Acmella Steudel, 1821, Hook. & Jacks., 1895. Spilanthes Acmella Steudel, 1841, Hook. & Jacks., 1895. Verbesina pseudoacmella Steudel, 1841. Spilanthes pseudoacmella Steudel, 1841. Spilanthes Pseudoacmella Steudel, 1841.

99. Veronica Anagallis aquatica:

Veronica Anagallis Scopoli, 1772, Hill, 1773, Moench, 1794, Berknh., 1795, Sprengel, 1825, Steudel, 1821 and 1841, Dulac, 1867, Hook. & Jacks., 1895. Veronica anagallis Lam., 1778. Veronica palustris Salisb., 1796. Veronica aquatica Buchoz, 1770, S. F. Gray, 1821.

Cardia amplexicaulis Dulac, 1867. Veronica acutifolia Gilib., 1792, ex Bubani. Veronica Anagallis-aquatica Hook. & Jacks., 1895.

100. Vitex Agnus castus:

Vitex verticillata Lam., 1778. Vitex agnus castus Lam., 1778, Steudel, 1821. Vitex agnus Stokes, 1812, St. Lager, 1880. Vitex Agnus Hook. & Jacks., 1895. Vitex Agnus-castus Hook. & Jacks., 1895. Agnus-Castus vulgaris Hook. & Jacks., 1893.

101. Zanthoxylum Clava herculis:

Zanthoxylum carolinianum Lam., 1778. Zanthoxylum clava herculis Moench, 1794. Zanthoxylum Clava Herculis Willd., 1805, Steudel, 1821 and 1841. Zanthoxylum claviger Stokes, 1812. Zanthoxylum clavatum St. Lager, 1880.

Zanthoxylum clavatum St. Lager, 1880. Zanthoxylum Clava-Herculis Hook. & Jacks., 1895.

There is presented above a list of almost one hundred names of plants precisely as Linnæus published them in 1753, hardly five of which are to be found unaltered in recent books of botany whether European or American; and this in the face of universal pretension that, beginning with the year named no specific term of any name is to be altered, even by the man who proposed it. On our side of the Atlantic one faction does indeed carry the professed principle of immutability to the extent of writing Catalpa Catalpa, Hepatica Hepatica, and a score of other such; but even in such instances when it comes to writing Vitis idaea Vitis idaea, Linnæus is doubly amended; for they make the four words over into Vitis-Idaea Vitis-Idaea, pretending that he had Vitis-Idaea, which he had not, though they can not bring themselves to write Melilotus Melilotus officinalis, or Filix Filix fragilis.

If the rule that "specific" names shall not be changed in transferring a plant to another genus has any meaning whatever, then such Linnæan names as Trifolium Melilotus officinalis, Trifolium Melilotus indica, Trifolium Melilotus italica, etc., ought to appear in our botanical literature as Melilotus Melilotus officinalis, Melilotus Melilotus indica, Melilotus Melilotus italica, etc. For the same reason Polypodium Filix fragilis ought to be present as Cystopteris Filix fragilis or Filix fragilis. We look for these in vain,

however; nor will they be found even hyphenated. A whole word has been arbitrarily suppressed, and we read only Cystopteris fragilis or Filix fragilis, Melilotus officinalis, Melilotus italica, Melilotus indica, etc. The authors of our manuals, however, protest that they have labored to bring them in agreement with the codes, and they insist apparently seriously that they have adopted the earliest "specific" names instead of that specific name which was first combined with the correct generic name.

As we have already intimated there is hardly the appearance even of consistency exhibited in such neglect. To illustrate the point we may take the example of two species of ferns both taken from one Linnæan genus. The Linnæan Asplenium Ruta muraria becomes in our books the hyphenated Asplenium Ruta-muraria, whereas Asplenium Adiantum nigrum appears simply as Asplenium nigrum, a whole word left out as in case of Cystopteris fragilis. It would seem not an easy matter on the part of our modern nomenclators to decide whether the dropping of a whole word from the text is much a different thing after all from the mere insertion of a hyphen. They are evidently not minded simply to end the forging process with hyphens only. That the instance occurs in one genus too is worthy of note! Again, in the same genus the Linnæan Asplenium Trichomanes ramosum has either been dropped entirely or A. viride Hudson put in its place.

The conclusions forced on us by the comparison of the Linnæan names of the Species Plantarum with the versions of them as appearing in the manuals and recent literature of botany, is that no matter how strongly the modern nomenclators protest in word and writing to their following their codes and keeping intact the text of his works, they are actually changing his names as much if not more than the writers quoted in the accompanying list, while all the time pretending not to do so. It may be said of the older writers at least that they seemed more honest or candid about their alterations. They did not pretend to serve divided masters, for there had not as yet been any congresses or codes save the codes of reason.

It is worthy of note that some of the followers of Linnæus imitated him in making ternary names. Bieberstein as late as 1819* had them, and even made new ones such as Trifolium Melilotus parviflorum, Trifolium Melilotus tauricum, Trifolium

[•] Bieberstein Flora Taurica Caucasica, Vol. III. p. 506-7 (1819).

Melilotus hamosum, etc. Brotero and Schousboe also made similar new ones under the genus Trifolium.

We have looked in vain for the following names which, by the rule of priority of the codes, ought to be the correct ones as transferred to the genera now recognized. There is here no question of hyphens, or of running together of the two last words of the Linnæan ternary. A whole word has been changed in form, or altogether left out, and this has been done by authors of recent date, despite the fact that the laws of priority of their code require the names in the following form:

Asplenium Adiantum nigrum. Asplenium Trichomanes dentatum.

Asplenium Trichomanes ramosum.

Hemerocallis Lilio Asphodelus.

Mussaenda fructu frondoso.

Cystopteris Filix fragilis, or Filix Filix fragilis.

Salvia africana coerulea.

Salvia africana lutea.

Trigonella Melilotus caerulea.

Trigonella Melilotus corniculata.

Trigonella Melilotus cretica.

Melilotus Melilotus indica.

Melilotus Melilotus italica.

Melilotus Melilotus officinalis.

Trigonella Melilotus ornithopodioides.

Melilotus Melilotus polonica.

Several such names from which part of the Linnæan trivial was omitted by older writers, have since been adopted, though with the inserted hyphens.

Alisma Plantago aquatica.

Legousia Speculum Veneris.

Cotyledon Umbilicus Veneris.

Scandix Pecten Veneris.

Radicula Nasturtium aquaticum.

Veronica Anagallis aquatica.

An unusually interesting case of the falsification of a Linnæan trivial name is that of *Apocynum foliis androsaemi* Linn., 1753. Any one on first seeing the name in this form would hardly think it

possible that such appears in the first edition of the Species Plantarum of Linnæus. One would hardly look for it except in the works of his predecessors, or of his contemporaries unfavorable to his methods. That writers of to-day who pretend to make the Species Plantarum of 1753 the beginning of priority, should have taken up for it the name Apocynum androsacmifolium and attribute it in this latter form to Linnæus, is certainly a case of testing the credulity of the botanical public. When, moreover, we actually see it in botanical works quoted as Apocynum androsacmifolium L., Sp. Pl., p. 213, 1753, then we must conclude that the manual maker had either not seen the original, or was trying to misrepresent facts. Such inaccuracy of quotation ought not to come from those who in matters nomenclatorial "strain at a gnat" on questions of priority to such an extent as to admit duplicate binaries, because the law of priority would strictly speaking be otherwise broken.

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The name Apocynum foliis androsaemi shows as well as any that Linnæus considered that any two-worded generic name or short phrase or term might serve as a trivial name no matter what its form. There are quite as many three-worded names in the second edition of the Species Plantarum of 1762–1763, as there are in the first. If the name Apocynum androsaemifolium is to be accepted, it ought at least not to be referred to the first edition of the Species Plantarum, but to the second, where it is found corrected. The first publication of the plant, however, being made in 1753, and in the very work from which, according to the codes, it is all important to begin all nomenclature, it is an interesting problem for the followers of these same codes, which alternative is to be taken up, an impossible name with priority to support it, or the only feasible name of the second edition not enjoying this prerogative!

Somewhat different from the foregoing is the case of the plant now called *Hemerocallis flava*. The Linnæan *Hemerocallis Lilio Asphodelus* had in the first edition of the Species Plantarum the two varieties, *flava* and *fulva*, the former designated as the type. In the second edition the ternary name does not appear, and the two plants are recognized as separate species under the names *Hemerocallis flava* and *Hemerocallis fulva*. Linnæus, therefore, changed the name of the former, a liberty which the codes do not permit even him to take, as it constitutes a breach of priority. Though *Hemerocallis Lilio Asphodelus* is the oldest name for one of the plants, we look in vain for it in any modern work of botany.

Following the lead of Linnæus, earlier and later botanists have suppressed the name which for the reason of priority ought to be used according to the codes.

In much the same condition do we find the names Salvia africana coerulea and Salvia africana lutea, one of the words being dropped in each case. Linnæus himself changed both names completely, calling the Salvia africana caerulea of the first edition, Salvia africana, and the other became Salvia aurea in the second edition.

It can not fail to surprise many of the younger botanists of the present that those two or three generations next succeeding Linnæus held the opinion that no name that was unsuitable was to be made permanent; that changes and improvement were to be made in the specific terms of binary names, when scientific truth and accuracy, or the call for brevity demanded; and that they were to be changed, amended, or entirely displaced, as freely as any other kind of error. Linnæus himself, as we have said, gave his own example to the same effect, when in the second edition of his Species Plantarum the earlier Apocynum foliis androsaemi was retired by him in favor of Apocynum androsaemifolium. The principal changes of his are the following:

FIRST EDITION.

Amarvllis Bella donna, Apocynum foliis androsaemi, Atropa Belladonna, Hemerocallis Lilio Asphodelus, H. flava. Lonicera Peri Clymenum, Mussaenda fructu frondoso. Panicum Crus galli (?), Prunus Lauro Cerasus. Robinia Pseudo Acacia. Salvia africana caerulea. Salvia africana lutea, Solanum Pseudo Capsicum, Trifolium Melilotus corniculata, Trigonella corniculata.

SECOND EDITION.

A. Belladonna.

A. androsaemifolium.

A. Belladonna.

L. Periclymenum.

M. frondosa.

P. Crusgaili.

P. Lauro-Cerasus.

R. Pseud-Acacia.

S. africana.

S. aurea.

S. Pseudocapsicum.

A rather striking case of the use of hyphens in order to make an otherwise impossible combination acceptable to the codes and manual makers, is that of the Linnæan Arbutus Uva ursi and Vaccinium Vitis idaea. Moench restored these plants to the older pre-Linnæan genera, Uva ursi and Vitis idaea, both two-worded generic ve

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names, such as were not objected to before Linnæus. When combining these binary generic terms with their rightful "specific" names transferred from the Species Plantarum as quoted above, we have Uva ursi Uva ursi and Vitis idaea Vitis idaea. Four-worded names can not, of course, be tolerated if three-worded ones are objectionable, but if the hyphen can make a binary out of a ternary, then two hyphens can as readily make a binary out of a quaternary name. Both Tournefort and the older writers who used Uva ursi * as a genus name, as well as Moench who restored it and Vitis idaea after 1753, might have used a hyphen here had they chosen so to do, just as Linnæus might have done for the trivial name, but neither Moench, Linnæus, nor any one before these had so used the name. To attribute to both Linnæus and Moench the genus or the combination of generic and trivial names, for which neither is responsible, and which without the stealthily inserted hyphens could not be allowed to stand as valid even under the laxest codes, is hardly to be considered as truthful or exact.

A practice resorted to in changing Linnæan names of the first edition consists in running the last two words of the ternary name together. This method is so easy and withal so convenient, as it eliminates even the use of the hyphen, that we wonder it had not been oftener resorted to. There is in a sense less of tampering with an original in this case, as nothing is actually added and almost nothing taken away. The deceit involved, presuming the two words to be attributed to the first edition of the Species Plantarum, is all the greater the more subtile the manner in which the two words are actually made into one. The hyphen at least seems a compromise, for it makes only a compound word. The process here outlined presumes to make one word of two absolutely. Besides the names so corrected by Linnæus himself and given in the preceding list, we have the following wrongfully attributed to him, and not found even in the second edition of the Species Plantarum:

Aesculus Hippocastanum. Ferula Assafoetida. Pyrus Chamaemespilus. Ballota Pseudodictamnus. Robinia Pseudacacia.

We may say in conclusion that apart from any comments, the simple list of Linnæan names from the Species Plantarum, together with the various attempts of Linnæus himself and his contemporaries, and followers to change these, shows that our present idea of the immutability of names originated in very recent times. It was

^{*} Uva ursi written as two words was used also by P. Miller in 1754.

an illustrious line of great botanists that gave the names of Hill, Lamarck, Moench, Gaertner, Allioni, Salisbury, Philip Miller, Scopoli, Persoon, Crantz, Stokes, and S. F. Gray, all of which between 1755 and 1830 were as diligent to improve specific names, as they were to make better descriptions and better classifications of plants.

Moreover our references in general to the changes that modern nomenclators make in accepting without question these corrections, and refusing to accept the names as published in 1753 by Linnæus, show that the highly flaunted priority of our own day is, regarding this list at least, as much a dead letter as it ever was. If the law of priority is to continue indisputable the list and the self-evident conclusions to be deduced therefrom will bear more than superficial consideration. The plain facts are, that Linnæan names have been changed, are still accepted in their changed form, are still being changed by contemporaneous nomenclators in spite of our much boasted adherence to the opposing dictates of the codes and their principles of priority, that this law of priority itself is in many respects still unfollowed by those that profess strictest and most scrupulous regard for it. There are those among the rising generation of botanists that are beginning to ask why principles are not being observed practically in spite of their theoretical appropriateness and the sanction of codes, and we feel, in view of the facts above discussed, that such demands are anything but unreasonable, and remain waiting for explanation.

V.-NEW PLANTS FROM NORTH DAKOTA.

By J. LUNELL.

Gaillardia aristata foliacea var. nov.

Caules simplices, unicapitulati, scapiformes vel foliis in parte inferiore accumulatis. Bracteae involucri in 3 series dispositae longitudinis inaequalis, intima quidem usque 2 cm. longa, hirsutissima, media usque 3.5 cm. longa, extrema usque 5 cm. longa, quarum utraque minus hirsuta, magis foliacea quam series intima est. Flores radiati breves et pauci, flavi, valde pilosi.

Stems simple, monocephalous, scapiform or with the leaves clustered on their lower part. Involucial bracts in 3 rows of unequal length, the inner series all to 2 cm. long, very hirsute, the second all to 3.5 cm. long, and the outer all to 5 cm. long, both of these less hirsute and more foliaceous than the innermost series. Rays short and few, yellow, very pilose.

This variety grows on dry plains, gravelly hills, etc., and can be found occasionally. The specimen just described was collected by the writer at Butte, Benson County, on August 27, 1909, at which late date the type of the species is usually altogether past flowering. Other specimens were found as early as July 20, the type even at this date being seen in an advanced fruiting stage.

Fragaria ovalis quinata var. nov.

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Sub foliolis tribus solitis minora duo opposita petiolum exornant. Besides the usual 3 leaflets there exist further down on the petiole 2 smaller, opposite leaflets.

Among the species occasionally at Leeds, Benson County. Collected by the writer on June 11, 1902.

Fragaria platypetala quadrifolia var. nov.

Folium in foliola quatuor verticillate divisum.

Leaf divided in a whorl of 4 leaflets.

Occasional with the type near St. John, in the Turtle Mountains of Rolette County, where it was collected by the writer on July 7, 1910.

Allionia decumbens assurgens var. nov.

Caules 2-4 dm. alti, adscendentes vel erecti.

Stems 2-4 dm. high, ascending or erect.

Collected by the writer on July 2, 1911, in gravelly soil on the margin of the woodland at Pleasant Lake, Benson County.

Sporobolus cryptandrus vaginatus var. nov.

Paniculus contractus et vagina superiore fere omnino inclusus.

Panicle contracted and almost wholly enclosed by the upper sheath.

Collected by the writer on July 28, 1911, on bare, gravelly hill-sides at Pleasant Lake, Benson County.

Actaea arguta alabastrina var. nov.

Baccis albis.

Berries white. The plant grows freely mixed with the type, in the same kind of soil and with the same habitat, the berries are sphaerical or subsphaerical and, when full-grown, 8-10 mm. in diameter, and the only visible difference is their color, being brilliantly cherry-red in the type, and just as brilliantly snow-white or alabaster-white in the variety. The ripening of the two is contemporaneous.

A. eburnea Rydb. has also white berries, but they are ellipsoid, 9–12 mm. long and 6 mm. wide. A. neglecta Gillman too has white (ellipsoid?) berries and has been placed by Prof. Robinson as a forma under A. rubra (Ait.) Willd. with A. eburnea as its synonym.

Tradescantia ramifera sp. nov.

Plantae praeter sepala et pedunculos glabrae, pallide virides, solitariae vel in fasciculis parvis crescentes. Caules basi erecti vel assurgentes, solitarii, geniculati, iterum iterumque ordinatimque ramos de omnibus axillis foliorum caulis et postea ramorum emittentes, 2–4 dm. alti. Folia linearia, involuta, recurvata, 7–9 vel interdum 10 mm. lata, basi vaginas glabras, parallelinerves, 1–4 cm. longas, circum caulem formantia. Bracteae involucri 1 vel plerumque 2, involutae, lanceolato-lineares, parte inferiore saltem quae 10–12 mm. lata est foliis latiore, recurvatae, glaberrimae. Umbellae terminales, sessiles, valde floriferae. Pedunculi 1–2 cm. longi, pilis apice glanduliferis dense vestiti. Sepala oblonga, viridia, membranoso-marginata, 7–10 mm. longa, pilis apice glanduliferis dense vestita. Petala saturate coerulea, 10–12 mm. longa, vel sepalis fere dimidio longiora. Filamenta basi mediocriter pilosa.

Plants glabrous except sepals and pedicels, pale green, solitary or growing in small tufts. Stems erect or ascending at the base, solitary, geniculate, repeatedly and successively branching from all the axils of the leaves on the stem and later on the branches, 2-4 dm. high. Leaves linear, involutely folded, recurved, 7-9 or sometimes 10 mm. wide, the bases forming glabrous, parallel-nerved sheaths, 1-4 cm. long, around the stem. Involucral bracts 1 or usually 2, involutely folded, lanceolate-linear, at least their lower part which is 10-12 mm. wide broader than the leaves, recurved, perfectly glabrous. Umbels terminal, sessile, many-flowered. Pedicels 1-2 cm. long, thickly pilose with gland-tipped hairs, as are also the oblong, green, scarious-margined sepals, which are 7-10 mm. long. Petals deep blue, 10-12 mm. long, or nearly ½ as long as the sepals. Filamenta tolerably pilose at base.

Belonging to that group of the genus having pedicels and sepals pilose with gland-tipped hairs, this species differs from T. bracteata Small which has deep green foliage, with bracts 2-2.8 cm. broad at

the base, ciliate and often villous, and flowers 2.5-3 cm. in diameter, and from *T. occidentalis* Britton which has bright green foliage, is taller, erect and simple-stemmed, with even the lower part of the bracts narrower than the leaves, and with petals about 14 mm. long.

Collected by the writer on July 13, 1899, on bare, gravelly, sterile, open ground of that stretch of rolling prairie named Sand Hills in McHenry County, also lately in the same kind of soil at Pleasant Lake, Benson County.

Senecio suavis sp. nov.

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Tota planta glabra, foliis crassis, firmis. Radix perennis, robusta, aut simplex conicaque, aut ramos nonnullos emittens, quorum singuli in caudice terminantur e quo caulis unus usque ad nonnullos oritur. Caulis 1–3 dm. altus. Folia caulina 3–5, linearilanceolata, 1–4 cm. longa, margine integro, vel undulato, vel serrato, vel pectinato, petiolis 0.5–2 cm. longis. Folia basilaria complura, late linearia—lanceolata, 3–4 cm. longa, 0.5–1 cm. lata, marginibus integris, vel crenatis, vel serratis, vel pectinatis, apice saepissime tridentato, petiolis 3–8 cm. longis. Caules capitula bina usque ad quaterna, 1 cm. longa, 0.5 cm. lata gerunt. Bracteae involucri circiter 17. Flores radiati circiter 6. Pappus albus. Achenia 2.5 mm. longa, obscure pulla, 4-costata, singulis costis pilis albis adpressis vestitis.

The whole plant glabrous with thick leaves of firm texture. Root perennial, stout, either simple and conical, or sending out several branches upwards, each ending in a crown from which one to several stems arise. Stem 1–3 dm. high. Stem leaves 3–5, linear-lanceolate, entire, wavy-margined, serrate or pectinate, 1–4 cm. long, with 0.5–2 cm. long petioles. Basal leaves very numerous, broadly linear to lanceolate, 3–4 cm. long, 0.5–1 cm. wide, with entire, or crenate, or serrate, or pectinate margin and oftenest tridentate apex, petioles 3–8 cm. long. Heads 2–4 on each stem, 1 cm. long, 0.5 cm. wide. Involucral bracts about 17. Rays about 6. Pappus white. Achenes 2.5 mm. long, dull brown, 4-ribbed with a row of white appressed hairs covering each rib.

Belonging to the same group as *S. mulabilis* Greene, *S. tridenticulatus* Rydb. and *S. oblanceolatus* Rydb., all of the Rocky Mountain flora, this species, and excluding other prominent characters, it differs from the first named by being perfectly glabrous and by its narrow basal leaves, and from the others by its extremely variable leaf margins and larger size.

Our species grows in bare, gravelly soil on open prairie hills, and was collected on July 2, 1911, by the writer at Pleasant Lake, Benson County. The name of the original station suggested the species name.

Antennaria chelonica sp. nov.

Planta caespites latos integens. Caules maris 4-10 cm. alti, feminae graciles, 1-3 dm. alti. Stolones elongati, procumbentes, bracteati, apice foliosi, flabelliformes. Folia basilaria firma, cuneatospatulata, indumento laminae superioris laete deciduo. Capitula 2-5 (plerumque 4), maris conferte condensata, feminae corymbosa et longipedicellata. Pedunculi ferme 1-2 cm. longi et ultra (interdum usque 13 cm.). Involucra 9-10 cm. alta. Squamae maris latae, albae, apice eroso-denticulato, vel propemodum integro, feminae lineares vel anguste spatulatae, albidae, subintegrae. Pappus maris sensim et paullulum apicem versus incrassatus, sub lente barbellulatus.

Plant broadly matted, with male plants 4-10 cm. high, and female slender, 1-3 dm. high. Stolons elongated, procumbent, bracteate, leafy at the top, flagelliform. Basal leaves firm, cuneate-spatulate, the indument disappearing at maturity on the upper side. Heads 2-5 (usually 4). Male plants with heads in dense, capitate clusters, female heads being corymbose and long-pedicelled. Pedicels usually 1-2 cm. long or more, sometimes being very long: one of my type plants has 4 heads and pedicels respectively 4.5, 5.5, 6.0 and 13.0 cm. long, arranged on the stem so as to make the inflorescence corymbose. Involucres large, 9-10 mm. high. Bracts of male heads with broad, white, erose-denticulate or almost entire tips; those of the female plants linear or narrowly spatulate, whitish, subentire. The male pappus gradually and slightly thickened towards the apex, under a hand lens barbellulate.

This species differs from A. neglecta Greene and allies in its large involucres, its corymbose inflorescence and its long (sometimes remarkably long) pedicels.

The plant grows in green woodland lanes where trees on both sides offer an ample shade. This natural condition being by no means common, it causes the plant to be quite rare. The type specimens were collected by the writer in the middle of June, 1910, and 1911, in the Turtle Mountains of Rolette County, in the vicinity of St. John. The species name is derived from *Chelone*, the Greek name for turtle.

ADDENDA.

Laciniaria scariosa scalaris var. nov.

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This variety will be numbered 9 in the Key of varieties. Insert on page 92 at the end of Clavis Analytica Varietatum.

A. Folia series inferioris ad folia series superioris

sensim et obscure gradientia 9. var. SCALARIS.

And on page 93 at the end of Key of varieties.

A. The leaves of the lower series passing imperceptibly

and indistinctly into the leaves of the upper series 9. var. scalaris.

The var. *scalaris* has short lower leaves, the lowest next to the tuber about 2.5 cm. long, the others about equal (on one stem 6.5 cm. long, on another 5.5 cm.), occupying one-fourth of the stem, broadly lanceolate—lanceolate.

The other leaves are narrowly lanceolate and very gradually reduced. On the whole stem there is (excepting the lowest leaf) never more than 0.5 cm. difference in length between two neighboring leaves, the uppermost of which is 0.5 cm. long. This variety seems to be rare, and was found in moderately moist and rich soil on the open prairie.

Helianthus apricus camporum comb. nov.

to replace *H. nitidus camporum* described in the Am. Midl. Nat. I, p. 237 (1910).

Its leaves being *scabrous* beneath, its *scabrous* stems and its *habitat* are characters peculiar to *H. apricus* and cause me, *ccteris* paribus, to place it preferentially with this species, though the outline of its leaf is that of *H. nitidus*.

Leeds, North Dakota.

I.—NEW PLANTS FROM MINNESOTA.

By J. LUNELL.

Astragalus Chandonnetii sp. nov.

Planta pallide viridis, caulibres robustis de rhizomate ligneo adscendentibus, geniculata, pilis albis adpressis vestita, 3 dm. alta. Foliola 11–19, oblonga vel angustiora, 10–25 mm. longa, 3–7 mm. lata, breviter petiolulata, pilis albis, densis, strigosis obtecta. Flores adscendentes, capitulum magnum, densum, cylindrycum, 3–4 cm. altum, 2 cm. latum formantes. Calyx indumento dense albostrigoso sine pilis atris sparsis gaudet. Dentes calyci longitudine aequales, marginibus viridibus, sere albidis, albo-strigosis. Bracteae floris angustae, tubo calycis longitudine fere aequales. Corolla circiter 1.5 cm. longa, alba vel albida.

Pale green with stout stems ascending from a woody rootstock, geniculate, with white, appressed hairs, 3 dm. high. Leaflets 11–19, oblong or narrower, 10–25 mm. long, 3–7 mm. wide, short-petiolulate, with white, dense, strigose hairs. Flowers ascending, in a large, dense cylindrical head, 3–4 cm. high and 2 cm. broad. Calyx densely white-strigose without scattered black hairs, with green, later whitish, white-strigose margined teeth as long as the tube. Floral bracts narrow, nearly as long as the calyx tube. Corolla about 1.5 cm. long, white or whitish. Pods not seen.

This beautiful plant differs from A. nitidus Dougl. by its large heads and leaflets and its longer calyx teeth, and from this and A. sulphurescens Rydb., a native of Colorado, by its white-strigose calyx without the admixture of more or less scattered black hairs, and by its large, white or whitish corolla. In addition, these two allies are as a rule glabrate, or else have only a scanty pubescence.

The handsomely prepared type specimen was collected in dry soil at McHugh near Detroit, Minn., on June 16, 1911, by Rev. Father Z. L. Chandonnet, who works ardently and enthusiastically in the botanical field whenever season and sacerdotal duties permit. It was simply a matter of course that this species should be named in his honor.

Meibomia grandiflora Chandonnetii var. nov.

Folia circum basem pedunculi haud, sed in parte quadam inferiore caulis accumulata. Insuper folium solum basem pedunculi ornat, saepeque folium alterum semel vel interdum bis subtus additur. Saepe demum folium solum semel (vel bis) infra parten foliorum accumulatam patefieri solet.

Leaves not clustered at the base of the peduncle, but further down on the stem. In addition to these there is one single leaf at the base of the peduncle, and often one or sometimes two single leaves beneath this. Lastly, there are often one or two single leaves on the stem below the clustered part. One plant had only single leaves and no cluster at all.

This variety, also named for Rev. Father Z. L. Chandonnet, was collected by him at Beaulieu, Mahnomen County, Minn., on July 27, 1911, and at other times. In submitting it to me he furnished valuable data regarding the plant. It is the frequent form there. I have also a specimen rightly belonging here and collected by Mr. Chas. C. Deam in Wells County, Indiana, with a single leaf 0-5 dm. above the clustered leaves, being his number 2325.

Leeds, North Dakota.

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